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VIII. *Of an Inguinal Rupture, with a Pin  
in the Appendix Cœci, incrusted with  
Stone ; and some Observations on  
Wounds in the Guts ; by Claudio  
Amyand, Esq; Serjeant Surgeon to His  
MAJESTY, and F. R. S.*

*O*ctober 8, 1735. *Hanvil Anderson*, a Boy, 11 Years of Age, was admitted into St. George's Hospital near Hyde-Park Corner, for the Cure of a *Hernia Scrotalis*, which he had had from his Infancy, and a Fistula between the Scrotum and Thigh terminating into it, which for a Month last past had discharged a great Quantity of an unkindly sort of Matter. The Rupture was small, and not troublesome, and Part of it could be replaced, but as it appeared that the Sinuous Ulcer sprung from that Part that could not ; so 'twas evident that the Cure of the Fistula depended upon the Cure of the Hernia, which latter could be obtained by no other Operation than that for the *Bubonorele*, which was agreed to, and performed the 6th Day of December following.

This Operation proved the most complicated and perplexing I ever met with, many unsuspected Oddities and Events concurring to make it as intricate as it proved laborious and difficult.

This Tumour, principally composed of the Omentum, was about the Bigness of a small Pippin : In it was found the Appendix Cœci perforated by a Pin incrusted with Stone towards the Head, the Point of which having perforated that Gut, gave way

to a Discharge of Fæces through the fistulous Opening therein, as the Portion of the Pin obturating the Aperture in it shifted its Situation. The Abscess formed in the Hernial Bag occasionally, and the Suppuration for two Months last past from this Place outwardly, had knit and confounded, and, as it were, imbibed together the Gut and Omentum with the Hernial Bag, and these with the Spermatick Vessels and the Testicule, so that it was as difficult to distinguish them from each other, as it was to separate them without wounding them; this Pin, whose Point was fixed in the Omentum, continually shifting its Situation, and occasioning a Discharge of Fæces. The Pin frequently lying in the way of the Knife, and starting out of the wounded Gut, as a Shot out of a Gun, the Inundation of Fæces upon this Occasion from a Gut we could not well distinguish, were so many Difficulties in the way: But the greatest yet was, what to do with the Gut, which all this while was unknown, and of which we could not come to the Knowledge, till the Operation was over; for this Appendix Cœci, which was the only Gut found in the Rupture, was so contracted, carious, duplicated, and changed in its Figure and Substance, that it was impossible to determine what kind of Gut it was, or to find out that it was only this Appendix elongated, and in Disguise.

We apprehended none of these Difficulties, when we undertook this Operation, in which we proceeded as usual: The Omentum lying uppermost in the Hernial Bag was dissected from the Parts it was knit to, and particularly the Gut it was imbibed with, and afterwards cut off close to the Abdominal Muscles without

without any previous Ligature, the Vessels in it being small, and the Substance of it more like a Sweet-bread than the Caul.

Much Time was spent in this Dissection ; we were freightened for Room, and greatly disturbed by the Discharge of the Fæces coming out of the Gut, upon every Motion the Pin lodged in it and the Omentum suffered, upon the Separation of these from each other. The Gut forming a double Tube, like a double-jointed Syphon, continuing in the Curve as it passed over the Testicule and Spermaticks, was separated one part from the other and from the adjacent Parts, as far as the Aperture in the Abdominal Muscles, where the unperforated End of it was separated therefrom, and thence stretched out and unfolded, which brought in View the Aperture made in it by the Pin hitherto concealed, through which that Part of it, which was incrusted with Chalk, had just made its way out upon an occasional Pressure, as a Cork out of a Bottle. It was the Opinion of the Physicians and Surgeons present, to amputate this Gut : To which End a circular Ligature was made about the sound Part of it, two Inches above the Aperture, and this being cut off an Inch below the Ligature, was replaced in the Abdomen, in such a Manner that an artificial Anus might be made there, if the Patient's Case should require it. Afterwards so much of the Hernial Bag as had been detached from the Skin, the Spermaticks, &c. was cut off, which, as they appeared in a found State, were preserved *in Situ*. The Fistulous Opening adjoining to the Thigh, and answering to the Aperture in the Gut, was opened ; some Angles of Skin in the way removed ; The Aperture in the Muscles, which had

been inlarged by Incision, was stopped up with a Tent; and the rest of the Dressings and the Situation of the Patient ordered so, as to remove from the Wound all such Pressure from within as might disturb the Cure.

'Tis easy to conceive that this Operation was as painful to the Patient as laborious to me: It was a continued Dissection, attended with Danger on Parts not well distinguished: It lasted near half an Hour, and the Patient bore it with great Courage. During it the Patient vomited largely, and had several Stools, but was soon composed by half an Ounce of Diacodium, and Emollient Embrocations and Fomentations, frequently applied warm on the Belly: He was blooded, and an Emollient Carminative oily Clyster was ordered to be applied in the Evening; but as he was easy, and the Belly not Tense, that was omitted. He was confined to a very sparing Diet, and his Body kept open by Clysters, injected every 2d Day, when Stools were wanted, to prevent straining. When dressed upon the 4th Day after the Operation, every thing appeared well, and we had good Reason to hope for a Cure, especially as the Discharge by the Anus was Natural. The Tent put into the Abdominal Aperture was not removed till the 8th. Upon the 10th the Ligature round the Appendix Cœci, where it had been amputated, dropt off, and no Faeces followed it; and as it was then plain they had taken the natural Course, from that Time the Wound was treated like an ordinary one, saving it was observed to keep a strong and constant Pressure over the Abdominal Aperature, as well to fence against the Intrusion of the Viscera into the Wound, as by a strong Incarnation and Cicatrix,

Cicatrix, effectually to secure the Patient against a Rupture. During the Time of the Cure he was confined to his Bed, always kept to sparing Diet, and ordered never to go to Stool but in a Bed-pan; by these means the Wound was completely healed up in less than a Month, and the Patient soon after discharged with a Truss, which he was ordered to wear some Time, to confirm the Cure.

That the Appendix Cœci should be the only Gut found in this Rupture, is a Case singular in Practice: This was full of Excrements, and occasionally could be distended with an additional Quantity, which upon Pressure was returned into the Colon, with that kind of Noise which Guts replaced generally give. This had occasioned a Diminution of the Tumour when compressed, before the Operation was performed, as the Patient was lying backwards with his Head downwards, and an Increase of it as he stood erect, when the Fæces from the Colon could get into it again.

The Patient does not remember, when he swallowed the Pin which had perforated the Gut within the Rupture. But as this Rupture was from his Infancy, fixed and unreducible, so it is likely the Pin had then made its way into the Appendix Cœci prolapsed; and that an Inflammation ensuing thereon, had occasioned an Adhesion, whereby the Increase of the Tumour had been checked, and the Reduction of the Parts prolapsed thereby, rendered impracticable.

The Surgeons who constantly dressed the Patient before the Operation, did observe then, as they have since, that the Humour discharged formerly at the Fistula, had frequently the Appearance, and, as they thought,

thought, the Smell of Excrements, so that there is no Doubt that the Cause of it was the Wound made in the Gut, by the Pin giving way occasionally to such a Discharge. The Patient also perfectly remembers, that the Impostumation or Gathering preceding the fistulous Discharge was attended with very little Pain, or much less than generally attends Suppuration. Which shews that the Extravasation of the Excrements from the Gut into the Hernial Bag, and the bursting of this Bag, were the Cause of the fistulous Discharge, and of the continuance of it outwardly.

As to the Pin found in the Rupture at the Time of the Operation, it is observable, that two Thirds of it, incrusted with a chalky Matter, were confined and concealed within the Gut ; the other Third next the Point, had made its way through it, the Point of which was so lodged in the Omentum wherein it was fixed, as to leave a free Passage for the Excrement from the perforated Gut outwardly, whenever the Perforation in the Gut, upon shifting the Position of the inclosed Pin, could open, and afford a Passage for the Discharge of the Fæces this way, which was as oft as this conical or pyramidal Pin did alter its Place, or did not exactly obturate the Aperture in the Appendix Cœci, it exactly fitted. I have already observed, that the Aperture made in the Gut by the Pin, lay concealed, the Point being lodged in the Omentum, lying parallel with the Gut, which was here duplicated, where it was so secured, that it seemed almost impossible it could ever make its way out of this Place, and its other Confinement in the Gut, as the Aperture was callous, and so resisting that it was with some Violence

Ience it was forced out of its Confinement through an Aperture fitted for the Point only and so freight, that the Report upon its coming out was like that of a Cork out of a Bottle; for though it appeared the Opening had occasionally been inlarged, as the incrusted Part of the Pin was pressed forward into it, yet it is plain Nature's Attempts to get rid of it had been fruitless, and might possibly have been so during all the Patient's Life.

Sir *Hans Sloane* has furnished the Curious with Instances of Bodies incrusted in the Guts with Stone, and of some making their way out, when there was little Probability of it. Daily Experience shews how far Nature will struggle to free herself, so that it is always most eligible to trust them to her Care: This may appear from the Difficulties that have attended the Cure of this Case, which at last did not prove so successful as it was first hoped for; for the Patient having been remiss in the wearing of his Truss, upon some Effort the Guts found a way into the Inguen again, six Months after the healing of the Wound. This Case also shews, that the best Operation, and the utmost Care, is no Security against the Relapse of a Rupture. This is the 3d or 4th Instance I have met with, of the Insufficiency of this Operation to effectuate a Cure of Ruptures; and yet it is plain, this is by far more likely to prove effectual, than the Caustick or any other Method cried up for the Cure of this Evil. In a growing Age, a good Spring Truss is an effectual Remedy; and in an Adult, this should be the ultimate one, though it is no more than a Palliative Cure.

*N. B.* The Omentum and the Gut amputated, with the Pin perforating it, are in the Repository of the Royal Society.

This Observation puts me in Mind of two I made during the late War in *Flanders*, and of two more lately in *London*.

### O B S E R V A T I O N I.

Upon opening the Body of a Soldier who had laboured many Years with an Inguinal and Scrotal Rupture, I found in a Segment of the Ilion, an Appendix like a Cœcum, about six Inches long; arising from that Gut, and nearly of the same Diameter with the Gut itself, the Coats whereof were somewhat thinner than those of the Ilion this Cœcum did arise from, whose Membranes and Dimensions were Natural. This Elongation of a Segment of the Ilion appeared as if it had been lodged in the Rupture Bag it lay near to, and into which it had been stretched along the Vagina of the Spermatick Vessels down to the Testicule, according to the Expansion of the Rupture Bag, which was of the same Dimension: This Production of the Ilion, or *Appendix Ilii*, was full of Fæces, somewhat narrower at its Rise or Opening into the Ilion than elsewhere, but nearly resembling it, and as found as that Gut it sprung from.

### O B S E R V A T I O N II.

A Soldier having been shot through the Belly, the Ball was cut out upon the posterior part of the Os Ilium.

Ilium. Through both Wounds the Fæces were chiefly discharged for several Months after, and at Dreslings a great Number of flat Worms, dead or alive, were found upon the Plaister. The Fæces having by degrees taken their Course through the Anus, in five or six Months after, the two Wounds being healed up, the Patient returned to his Duty as a Soldier, and soon after was made Corporal, and then Serjeant.

Eight Years after this, I had him again under my Care at the Hospital, where he was brought with the Head of the *Os Humeri*, together with that of the *Acromion* and Clavicle, in the Articulation with the *Scapula*, fractured by a Cannon-shot, which thereby was laid all open. The Limb was immediately cut off in the Articulation with the *Scapula*, having first premised a Ligature about the Flesh surrounding the Vessels, by thrusting close to the Bone a Pack-Needle armed with a strong Packthread, there being no room for the *Tourniquet*\* : He lost very little more Blood in the Operation, than if a *Tourniquet* had been applied ; but the great Discharge of Matter sunk him, and he died the 8th Day after.

The Death of this Patient gave me an Opportunity of examining how the former Wound in the Gut had been cured. I had thought the Wound had been in the Ilium, from the Thinness of the Fæces discharged through that Wound ; but, upon Dissection, I found

\* Mr. *Le Dram*, in his Chirurgical Observations, Vol. II. Observ. 43. 12<sup>o</sup>. 1731. has described the Manner of performing the Amputation of the Humerus in the Articulation with the Scapula, to which the Reader is referred.

it had been in the Colon in the broadest Part of it. This was very much contracted, and made narrow in that Part of it that had been shot through, where it appeared pursed up, and inseparably knit to the Ilium Bone. However, the Patient never had complained of any Inconveniency therefrom, though the Narrowness of the Gut in this Place was such, as seemed to make the Descent of the Fæces difficult.

### O B S E R V A T I O N III.

On the 19th of *January 1729*, I attended Miss— aged 14, on account of a suppurated Tumour on the Navel, whose Situation was under the *Musculi Recti*. This Patient had had, what is truely called, a Starting at the Navel in her Infancy ; and of late had complained, at Times, of a Swelling there, and also of Colicks, Gripes, or Vomitings, that used to go off, particularly as that Swelling disappeared. As these grew more troublesome, she lately had taken a Vomit, from which Time she had been greatly caustive, and her Reachings, Vomitings, and Colicks, had proved more constant, together with an increasing Tension and Pain in the Fore-part of the Belly, and a Tenderness at the Navel, as Matter was gathering there.

Some Days before I was called in, Dr. *Campbell* had employed the properst Remedies to remove these Complaints. Upon a Consultation, we agreed to discharge by Incision the Matter collected at the Navel, being about a Spoonful of undigested Fluid, that had made its way through the *Aponeurosis* of the Abdominal Muscles adjoining to the Navel Cicatrix : Notwithstanding which, the Tension of the Belly,  
the

the Caustiveness, the Reachings, and Vomitings, rather increasing, as in the *Miserere Mei*, and having thence a Reason to apprehend a Strangulation and Suppuration of some of the *Viscera* in the Neighbourhood of the Navel, Dr. Hollings being called in, it was agreed to enlarge the Aperture made by the fore-mentioned Matter in the *Linea Alba*, with a View and Intent to know the State the Parts were in, to reduce what we found there, or at least to procure a more free Discharge to the Matter collected under the *Aponeurosis* of the Muscles: For a Fortnight and more, every Thing was done that could internally or externally ease the Discharge, and open the Passage for the Fæces downwards, but all in vain. The Patient was a whole Fortnight without a Stool, all the Symptoms daily increasing, though towards the latter End she vomited rather more seldom: Yet, as she was still taking in, so the Dimensions of her Belly increased in Proportion, and the more for that the Air confined and rarefied in the Fæces pent in, added daily to the Tension; which at last had stretched the Skin to the utmost. There was also a Suppression of Urine, the Fundus of the Bladder being stretched towards the Navel, at the same Time that the Neck of it was compressed by the Fæces bearing down in the Pelvis, and a Tumour sprung up about the Anus, as if they had been seeking a Passage that way. It was proposed to scoop them out, but the Rectum was found empty, and the Obstruction as far beyond the Reach of any Chirurgical Operation, as it had proved against all the Means hitherto employed.

The Patient was now reduced to the lowest Ebb. The Dejections were Excrementitious, her Pulse de-

pressed, and extremely weak ; she had Rigors, clammy Sweats, and all the Symptoms that denote an approaching Death, from a Mortification in the Guts, when of a sudden the Fæces bursted the Gut, and forcing their way through the Incision at the Navel, a Quantity equal to two or three Quarts, intermixed with various kinds of Fruits and Seeds, which she had been taking during her Illness, flowed out like a Torrent, with a surprizing roaring Noise, which gave her immediate Relief. The Discharge continued very great all that Day, but the Aperture in the Hernial Bag was not answerable to that in the Gut, so that the Discharge there was at Times checked by Substances obturating it ; this Aperture therefore was enlarged by Incision, and thereby the Patient released from the Violence of the Vomiting and Hickup. From this Time we began to entertain some Hopes of a Cure ; for though the Patient was extremely reduced, and the Discharge continued exceedingly great during several Days, with a Singultus and Vomitings ; yet she was refreshed with Sleep, and was able to retain some Nourishment. The Tension of the Belly subsisted, though in a lesser degree, until the Fæces had made their way downwards, and so did the Vomitings at Times, so long as the Inflammation continued. The Diet was such as the Case required ; Clysters were frequently applied, as well as Fomentations, and every Thing else that could determine or invite the Discharge through the Anus, and restore the distended Guts to their Tone ; but from the Time the Fæces bursted the Gut, it was 12 Days before any took the natural Course ; and then we were again brought to the Brink of Ruin, for they then poured down so fast for a Day or two, that the Patient was like to have funk

stunk under them: However, this severe Evacuation was timely conquered by Absorbents and Diluents: It took off the remaining Tension of the Belly, and all Vomitings; and as from this Time the Fæces had a free Discharge the natural way, and the Discharge through the Wound decreased in proportion, so the Wound in the Gut, and the external Wound in the Integuments were healed up in about three Weeks, in such Manner that the Patient has ever since enjoyed a most perfect Health.

#### O B S E R V A T I O N IV.

It happened that I was not a meer Stranger to the principal Circumstances of this Case, as in the Year 1716 I had attended such another with the late Mr. *Lafage*, Surgeon, *viz.* Miss———a Girl about four Years of Age, in whom the same Cause had produced the like Effects; for upon a Suppuration of the Omentum strangulated in the Navel of this Patient, the Fæces detained in the neighbouring Gut had in like Manner forced their way through the Navel: The Accident previous to the bursting, and subsequent upon it, having been nearly the same as in the former Observation; only the Cure proved somewhat more tedious, for the Wound was kept open by Currants-seeds frequently working their way out at the Navel for about 12 Months after; when it was made complete: so that the Hardships the Patient has undergone since in Child-bearing, and several hazardous Labours, have not been able to disturb it.

Hence it appears, that the Parts inflamed and in Contact have been coalesced and knit together, so as to prevent

prevent any Extravasation from the wounded or bursted Gut into the Cavity of the Abdomen.

That the Cure in the two last Cases has been owing to a free Discharge of the Fæces through the Wound, and consequently that when in a Gut-Rupture the Part prolapsed cannot be reduced, a Cure may be hoped for by making such an Opening in the Guts, before they are intirely sphacelated, as may procure a free Discharge to the Fæces pent in, and thereby secure the Patient's Life.

That if this happens to the Colon or Cæcum, the Tube of it will so far be preserved as to open a free Discharge for the Fæces the natural way; and if that cannot be obtained in a Wound of the small Gut, yet the Discharge may be secured by making the Wound an artificial Anus.

That the readiest way to obtain a Cure of a wounded or bursted Gut, is to keep it in Contact with the outward Wound, and the Patient in a very low Diet.

That the Deligation of the Vessels of the Omentum previous to the Amputation of it, being liable to many Exceptions, it is more eligible to forbear it, saving when the Vessels are large; for when reduced loose and floating, it is less liable to the Inflammations and Suppurations that attend the Separation of the Ligature.